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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

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THE OLDEST BEE-PAPER IN AMERICA

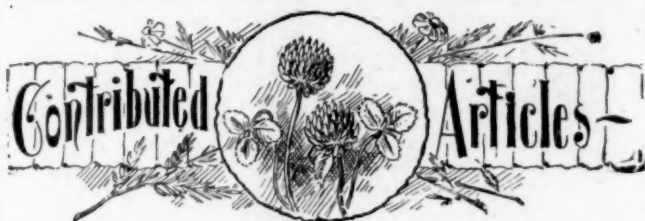
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36th Year.

CHICAGO, ILL., JAN. 30, 1896.

No. 5.



Alsike Clover for Honey and Forage.

BY FRANK COVERDALE.

I have, as usual, raised a fine field of this very valuable crop. No crop pays me so well in dollars as does Alsike clover. It has never yet failed. I have secured a fair stand at sowing during the past two dry seasons. From 35 acres, 115 bushels of fine, re-cleaned seed has been hulled, and the hay, after being stacked, is equivalent to at least one ton of extra hay for cattle (one ton per acre). Let us figure the proceeds:

115 bushels at \$5 per bushel, clear.....\$575 00
One ton choice hay per acre, at \$6 per ton.. 210 00

Total\$785 00

This is at very low figures. It is a little over \$22 per acre, saying nothing about fall feed, or how much better the



Alsike Clover.



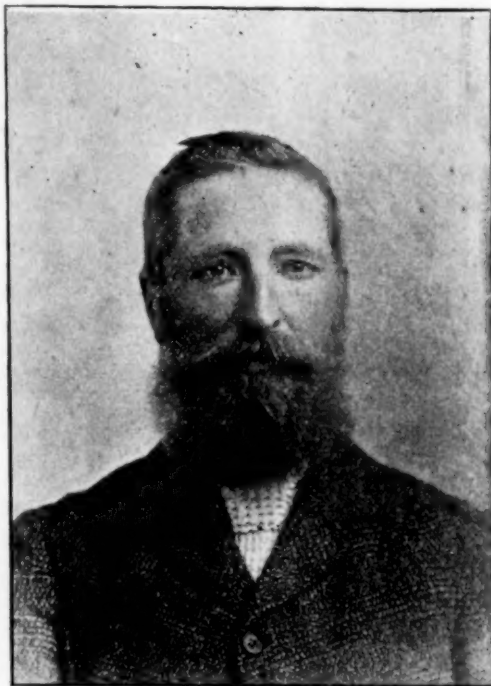
Crimson Clover.

land is after it is taken off. Fifty bushels of corn per acre at 25 cents per bushel will net when sold \$12.50, and after much more labor has been required to attend and harvest it—a little over half the profit, and the land made poorer! What

a contrast! Are these not facts? Yes, they are facts at home. I ask you to read carefully every word of this, then put on your thinking cap, as Alsike is an excellent honey-yielder.

ALFALFA FOR HONEY AND FORAGE.

Three acres of fine alfalfa grows about three miles south of here. It has been there for three years, or cut two seasons.



Mr. J. K. Darling, Almonte, Ont.—See page 68.

It is on top of hills and in a valley, and does well in both cases, yielding more good hay than any other clover grown here—three good cuttings in a single season, or one cutting for hay and one for seed. Bees work on it some, but do not take to it as well as to Alsike. I have some fine alfalfa, sown last spring, which has made a good growth during the past very dry summer. Drouth doesn't kill it at all, even when all other clovers will die (except sweet clover).

SWEET CLOVER FOR HONEY.

Sweet clover is spreading rapidly here. It seems to thrive anywhere wherever it drops its seed on the hardest of ground, and on wet, low land, in school-yards, fence-corners, or anywhere. I know of two places where it extends two miles almost a solid mat on either side of the road, and one school-house yard near me has for years been an ocean of bloom. Sometimes it is cut down, but it seems to sprout and

bloom again. Sweet clover never fails to yield honey, and is the best of all honey-plants here, *by far*.

Three miles west of me is three miles of it, and three colonies of bees in the midst of it. Those colonies were working continually on it, and the hives were chock-full of honey when my bees were doing nothing. Mine at that time were away at basswood, 12 miles away, and had no sweet clover. I am sure that if all the roadsides were growing it, honey would be plenty every year.

CRIMSON CLOVER.

I sowed 5 acres of crimson clover Sept. 20. The ground has been frozen six inches deep, with some snow, and at this writing the snow has melted and thawed the ground, with fine rains, and the crimson clover looks just as green as before. It is actually growing now; *perhaps it may winter!*

Delmar, Iowa.



The Place of Theory in Apiculture, Etc.

BY F. L. THOMPSON.

I notice that my statements—"Even facts may be misleading," and "To keep adding more experience, first on one side, then on the other, leads to no conclusions"—have been taken for exaggerations, and replied to with exaggerations—"facts, not theories," and "theory vs. practice." It is as plain as anything well can be that those statements of mine mean "facts and theories," not "theories vs. facts."

But, while stating the mere truth in regard to the limitations of facts, I did not express my opinion of the relative value of practice and theory. This seems to have worried some. Well, I will do so now. Practice is far, far preferable to theory *when you can get it*; and fact, in one sense, can snap its fingers at theory, while theory has to have a basis of fact. There.

But why is it adverse to common-sense to omit commonplaces? And why should it be so exceedingly sensible to take commonplaces, and exaggerate them? That is just what is done by the maxim, "Facts, not theories." It is not true. Facts exist without theories; but they cannot be applied without them.

Now, just to show my fiercely practical critics how reasonable I can be, I will add that all theorizing has an innate *tendency* to become fine-spun and impracticable. There's an admission for you, though you don't deserve it. But remember, that is not saying that that tendency cannot be resisted, and that there are not such things as suggestive, important, and practical theories.

Further, I believe that in American apiculture, at least, the proportion of pure theory to fact should be kept small. For, as I understand it, most of us keep bees primarily for money, and only secondarily because it is agreeable to keep them. But (to refer momentarily to another question) it is mere affectation to take no account of the latter; while the most matter-of-fact and practical among us, it is very evident, cannot keep out theory as they say they do.

Let us see how it would work to apply that remarkably acute rule of "facts, not theories." Turn over the pages of the American Bee Journal for 1895, and strike out the following: Page 18, Mr. Abbott's theory that it is the swarming bees that gather honey; page 98, Mr. Davenport's theory that locality has nothing to do with the right size of a hive; page 149, Dr. Brown's theory that breeding for honey-gathering requires breeding for muscular development; page 326, Mr. Doolittle's theory on the prevention of swarming; page 376, Mr. Davenport's theory that eight frames are enough for the best queens; page 618, Mr. Vandevord's theory that longevity and prolificness can be easily combined; pages 618 and 824, Messrs. Vandevord's and Barclay's theory that longevity tends to prevent swarming more than anything else; excise elsewhere Mr. McKnight's theory that cellar-wintering may imitate the good effects of out-door wintering by occasionally raising the temperature; Mr. Heddon's theories on pollen in winter-food; value of the storage and transmission of winter sunshine; breeding out the swarming impulse; great superiority of shallow to deep frames in breeding; cause of poor seasons, etc.

The foregoing, however, are the most obvious cases. If we should insist on applying the rule literally, strictly, and unsparingly, the information left would be the merest shell.

See also Mr. Abbott's words on this subject on page 283; and even supposing all those theories were false, ponder the following from Darwin: "False facts are highly injurious to the progress of science, for they often endure long; but false views, if supported by some evidence, do little harm, for every one takes a salutary pleasure in proving their falseness; and

when this is done, one path toward error is closed, and the road to truth is often at the same time opened."

It seems to me that the motto, "Facts, not theories," is a rather fantastic one to indicate a truthful ideal; while the idea that there is such a question as "Theory vs. practice" is, to say the least, picturesque.

EXPLANATION ON OVERSTOCKING.

In reply to Dr. Miller's note on page 823 (1895), I am pretty certain my copy contained a comma in the place referred to.

I don't mean to say there is no such thing as overstocking, nor that if in a good season 200 colonies do well, they might all starve if the number was increased enough. Perhaps, Dr. Miller, you and I are thinking of different things. I remember reading that bees sometimes pay no attention to white clover, showing that there is then no nectar in it. In such a case those blossoms might as well not be there, as far as the bees are concerned, and the few other flowers that remain are not sufficient to prevent the locality from being overstocked by a few colonies. But that is not the kind of poor seasons we have here. The alfalfa never fails to yield nectar, though sometimes in scanty dribbles. Now, as long as nectar flows in each blossom, I don't see that the bees have very much less work to do to keep them all licked out often enough to prevent re-absorption into the tissues of the plant, when it is coming in a scanty stream then when it is coming in a full one—the quantity in each flower is exceedingly small, even in the latter case.

To illustrate: When I was a boy we used to depend for firewood on the driftwood along the creek bottom. Sometimes there would be here and there a stick, and sometimes they would lie in beds. Generally the former condition would prevail. Two persons would then gather perhaps three loads a day. Now, do you mean to tell me that when two can gather three loads, one person can gather six? Isn't there something shaky about that idea?

If my reasoning is correct, then when 200 colonies do not do well in a poor season in a locality such as mine, to say that 100 colonies would have done better is also "one of those half-truths that sometimes make mischief," and in the light of the experience I have before given, there appears to be no grounds for fixing on 200 as the limit. Arvada, Colo.



Some Subjects Reviewed and Commented Upon

BY DR. C. C. MILLER.

NON-SWARMING BEES.—The interesting report of Jno. McKimmie, on page 29, suggests that he would be doing a favor if he would tell how many colonies he has had that have not swarmed during the past six years; also the size and number of frames used, and whether he runs for comb or extracted honey.

Box-Hives.—E. H. Gabus (page 36) brings good support to show that under some circumstances box-hives may be excused for not going out of existence. The whole thing in a nut-shell is this: Movable combs are not for the benefit of bees, but of bee-keepers; box-hives are as comfortable as the others, and perhaps more so; and there's no use in having *movable* combs if they're never to be *moved*. So important are box-hives considered in Germany that the very able Centralblatt alternates by giving special instructions for box-hives in one number and for movable-comb hives in the next.

NORTH AND SOUTH.—J. D. Fooshe is puzzled (page 42) to know why, in spite of the many advantages, Southern bee-keepers do not succeed better than those in the North. Possibly he can find a partial explanation in his own words, when he says: "In October the golden-rod and asters are in full bloom, and our bees gather more honey and a better quality than from any other source." If a Northern bee-keeper got no better honey than golden-rod and asters yield, he would hardly make a very big success.

SWARMING BEES.—On page 45 Paul Whitebread cites the case of two colonies to show that swarming bees do best. It should be remembered that very little can be proven by an isolated case. I'm not now discussing whether swarming or non-swarming is best, but many a time two colonies side by side, alike in every respect so far as can be seen, will give very different results. Of course, there is a difference, even if it can't be seen, and Mr. Whitebread's queen may not have been as good as the other. If he'll have 50 colonies of non-swarmers side by side with 50 swarmers, and then note the results,

not for a single year, but for a series of years, he will have some data that will be of value. But if he can always stop swarming by giving 48 sections he'll do better than others.

BEES CUTTING LEAVES.—On page 45, R. Howell asks about bees cutting out pieces of lilac leaves and carrying them off. I think if he had followed up those bees he would have found that they didn't go to hives, but were a sort of wild bee that make very ingenious nests by means of pieces of leaves. They make very rapid work in cutting the leaves with their powerful jaws. I never saw them on lilacs, but I've watched them many a time cutting rose-leaves.

MOWING SWEET CLOVER.—In reply to C. Winn's question, on page 46, if sweet clover be cut down as late as July 10, it would in some cases be so far advanced that cutting it close might kill it outright, although in some cases it would sprout up again. But if it were cut down before coming into bloom, and then cut down again July 10, I think he would find it would bloom till frost. Indeed, it often sends out fresh shoots on the apparently dead stalks that blossom late.

Marengo, Ill.



No. 1.—Experiences, Impressions and Reflections After Five Years of Bee-Keeping in California.

BY RAMBLER.

There is evidently no area of land on our continent that excites more wonder and curiosity than the State of California. The story of its early settlement by the Spanish Padres, the establishment of the missions and the civilization of the degraded natives, was full of romance, adventure and Christian fortitude; and now that age is passed, and we have here the ruins of those missions that long ago meant so much for California. Their broken and vine-covered arches re-echo now only to the tread of the tourist, and the bells that once sent their sweet chimes echoing over mountains and plains, hang in silence above the crumbling walls.

California—then the land of romance, isolated from the East by lofty ranges of mountains, and long stretches of alkaline deserts—it required in the early days heroic efforts to reach it. We all read with intense interest, even at this late date, the adventures of Fremont and his fellow explorers, as they opened up the pathway to this Coast.

The discovery of gold, with all of its attendant excitement, adventures, successes and disappointments, and the tide of immigration from every quarter of the globe, added another chapter to the romance of the land. With the influx of more people the unknown canyons were explored, and the great natural wonders continued to enlist a lively interest; and when all other themes had been exploited, the wonderful climate became a subject of never-ending admiration.

In every sense of the word it is the "Land of Sunshine." While blizzards are tearing the Eastern States, and intense cold sends people shivering to their firesides, this strip of country—200 miles wide and 800 in length—is redolent with the odor of roses, and the seasons are so gradual in their changes, and so mild, that it seems like one unending summer; the resident often forgetting that the balmy weather of January is indeed winter.

In the early days of mining, fortunes of gold were not bestowed upon all, and the agriculturist not finding the yellow metal turned his attention to the cultivation of the soil. As a natural sequence the honey-bee soon followed the orchardist, and soil and tree and hive, all upheld the reputation of the country for wonderful results, and the romance of the land has never been diminished.

My theme, however, in these sketches, is not California and its wonders, but they are to give experiences, impressions, and conclusions drawn from five years' actual service in California apiaries. In this service I have endured stings, rattlesnakes, skunks, and coyotes, and, like a battle-scarred veteran, I am spared to tell the tale.

In a portion of these sketches I will necessarily go over some ground that I have already written up in *Gleanings in Bee-Culture*, and while the main facts have been given in part before, I here touch upon actual work and impressions that could be gathered only after living here a term of years.

I was not attracted toward California by any sentiment of romance, or in the pursuit of the ever-fleeting phantom—gold; but having followed wife and child, and parents, to their last resting-place, I felt that the light and warmth of loving hearts had gone from my old home forever; an undefined unrest took possession of me, and it seemed that no distance

was too great to separate me from the scenes of my affliction; and that unrest has sent me far, far indeed from the scenes and acquaintances of all of my previous life.

I arrived in Sacramento July 17, 1891, and stopped a few weeks with a kinsman, who is in business in that beautiful capital city. I soon learned that bee-keeping was a pursuit of not much consequence here—a few small apiaries were located in the suburbs of the city, the owners living in peace and harmony with their fruit-growing neighbors; down the river were other and larger apiaries, but the honey they produced was not in large quantities, and not of a high grade.

In the early days of California bee-keeping the Sacramento valley had been a noted field for honey-production, and it was here that Mr. Harbison commenced the career that afterward gave him world-wide fame as a honey-producer. But the Sacramento valley was the first to be put to agricultural uses, and the sages and a multitude of wild flowers were destroyed, wide areas of wheat usurping their place. Mr. Harbison finding his occupation crippled in this valley, moved to the extreme southern end of the State, and in sight of the Mexican line had, for many years, an unmolested field.

After a few weeks in Sacramento, I followed the example of Harbison, and also traveled to the south. Here, indeed, I found bee-keeping conducted upon those extensive plans about which I had so often read—the out-apiary in some remote canyon; the wild country; the honey-flora so different from the flowers I had observed so much in the East; and the wintering problem no factor whatever. All of these features were new and novel, and though the same principles are applied here for the production of honey, they are applied under more favorable circumstances than when applied under Eastern skies.

Merry Christmas found me in the city of Riverside—a stranger among strangers. Not a person in the city, and in fact amongst the active thousands of all Southern California, that I had ever met before; and if there is any time that will try one's remembrance of the old friends that annually gathered around the hearth of the old homestead with good cheer at Christmas time, it is this utter separation and isolation, thousands of miles away. New homes have been planted here, and we see the families gathering for their happy festivities. Would you call it a weakness if a tear comes to the eye in remembrance of the faces I shall see never more? And a moment of sadness steals into the heart as I take my seat and eat my Christmas dinner at the table of a restaurant with a jostling crowd of individuals like myself—homeless.

But such are the changes of life.

The fame of Riverside as an orange-growing city had long been known to me, and now the noble fruit was ripening; the train sped through miles of orchards, orange trees upon every side; up the long rows at the right and the left, perfect balls of golden fruit resting against a back-ground of dark-green foliage; then there are breaks in the rows, and a green lawn appears, as a symmetrical evergreen hedge, a quaint residence, often hid beneath trailing vines, upon which are fragrant blossoms on this Christmas day. Another break, and we look up a long avenue of pepper-trees, their branches trailing to the ground like those of weeping-willow. Another avenue, and the palm and the century-plant greet us. Still another, and the magnolia, the cork-elm and the gum-tree serve as ornaments and shade.

It is said that first impressions are often lasting, and so this first impression of Riverside was that of beauty, and though I have since seen many cities in California perhaps equally beautiful, this first impression of most beauty in Riverside clings to me still. It was no less an interesting experience when a few weeks later the orange-tree was in bloom and the air laded with its perfume, the busy hum of the honey-bee could be heard upon every hand, in that loud, busy hum that denotes the gathering of honey, giving one the idea that the orange-orchards alone would sustain many apiaries within the bounds of Riverside.

(To be continued.)



Working Two Queens in One Hive.

BY J. A. GOLDEN.

From the South comes a letter requesting me to give my plan of working two queens in one hive, for the production of section honey. In order to do so I will give the method that proved the most satisfactory of any experiments tested, and what I learned about the width of brood-frames and the spacing of the same, which produced two very desirable features to the producing of section honey, namely, a capacious

brood-nest, and bees quickly to enter the surplus department.

As my hive-body measures 14 inches in width inside, I divide that space by fitting in a $\frac{3}{8}$ -inch division-board, having previously cut out a circular hole 6 inches in diameter, covered with wire-cloth, which permits the air to pass from one colony to the other, causing the same scent, and no fight will ever occur with each other. The bee-entrances should be at opposite ends. Place six $\frac{3}{8}$ -inch top-bar frames $1\frac{1}{2}$ inches from center to center, previously filled with full sheets of comb foundation; after which two swarms of bees are allowed to enter upon nearly 1,750 square inches of comb foundation, or 875 square inches to each colony, which cannot be drawn but a trifle beyond the brood capacity, consequently the surplus sections must be promptly put on in two or three days after the bees commence work; for every bee-keeper has observed how quickly a swarm of bees will draw out a set of combs, even when allowed to the standard width.

I learned from my experiment that if the bees were not promptly supplied with sections filled with comb foundation, they would crowd the queen to the smallest laying capacity, take the swarming fever and sulk; and then the two-queen project will prove a failure so far as surplus honey is concerned, for when bees once get it into their little heads to swarm, they will either *swarm*, or *sulk* and *die*.

I also discovered that narrow frames and narrow spacing caused the entire full capacity of the brood-comb cells to be so near the proper length of brood-cells that the queens seemed to double their egg-laying capacity, until the 12 frames contained full sheets of brood, and so long as plenty of room was provided above, the bees gave no fears about swarming; but a large per cent. was gained in honey, over the one-queen colonies.

I have thus given, in as few words as possible, my two-queen system.

On examining my two-queen colonies to-day (Jan. 7), when the mercury registers 2° below zero, I find them clustered together as one cluster, except the wire-cloth that keeps them separated; and as my combined hive-cover admits sufficient ventilation, the combs are dry, and the bees in the best possible condition. If all goes well, I expect great things the coming season of 1896, from my two-queen colonies.

Reinersville, Ohio.



Hive-Contraction and Management.

After reading Mr. Doolittle's article on contraction of hives, in the Bee Journal of Dec. 25, 1895, Mr. I. N. Hoagland, of Brooklyn, N. Y., wanted to ask him a few questions, which follow with Mr. Doolittle's answers to them:

QUES.—1. When you contract the brood-nest to 4 or 5 frames, and those frames are pretty well filled with eggs, brood and honey, will not the colony go to work and prepare, and soon swarm?

Ans.—The contraction spoken of, is used only with newly-hived swarms, or colonies having a poor queen, as all good queens will keep from seven to nine frames filled with brood previous to and during the forepart of the honey harvest. In case of a new swarm the queen will keep the comb filled with eggs as fast as built by the bees, so there will be little or no honey in the combs in the brood-nest, providing ample room is given for work in the sections; in which case the bees will have no desire to swarm till after the young brood begins to hatch, or 24 days from time of hiving. The honey harvest is then nearly or quite past, and at that time the hive is to be filled out with drawn combs or full sheets of comb foundation. With a poor queen, swarms are not very likely to issue, in any event.

QUES.—2. If you give them those 4 or 5 frames filled with empty comb or merely starters, will they not fill them with brood and honey, instead of filling the section-case with honey? And would not the colony be the better and stronger if they could retain the brood that you remove in contracting?

Ans.—If you put bait sections in the surplus apartment, and contract the hive at the time of hiving new swarms, no trouble will be experienced along the line of honey in the brood-combs, whether empty combs are given, or starters. However, I prefer to use only starters in the brood-frames when working on the contracting plan, as I secure beautiful, all-worker combs in this way, with scarcely a cent of cost to me of honey or otherwise, as far as I can see.

QUES.—3. At the time of contraction do you place a queen-excluder between the brood-nest and section-case?

Ans.—When any hive is contracted to less than the full egg-laying capacity of the queen, it is well to use a queen-excluder between the brood-nest and the sections, otherwise the queen may enter the sections, and brood in the sections will be the result. Such result is neither profitable nor pleasant.

QUES.—4. If at the commencement or during the honey-flow a colony should swarm, and you removed the old hive, and gave a new one to the new swarm on the old stand, would you then contract to 4 or 5 frames? And would you give the frames of empty comb, or merely the frames with starters? Or would you give them frames partly well-filled with brood, eggs, and honey?

Ans.—I would give the swarm in the new hive only 4 or 5 frames, and those having starters only. I consider it a fallacy to give any prime swarm brood in any stage of advancement. Nature never provides any to the newly-hived swarm, and it is well to follow Nature in this case, instead of theory. So says an experience of 27 years in bee-keeping as a specialist; although I have practiced the giving of brood to swarms very largely during that time.

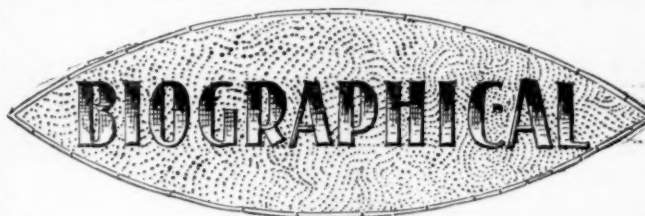
QUES.—5. Would you proceed the same way with a very strong colony which you expect soon to swarm, and most of which you have removed with the queen to a new hive on the old stand?

Ans.—Artificially-made swarms are treated the same as natural, but the advantages of the contraction system are not as apparent with such as with the natural swarms.

QUES.—6. If you have frames that are mostly filled with capped honey, would they not be as good as dummies to use in contracting?

Ans.—Combs of capped honey may be used in hiving swarms, but they will not answer the purpose of dummies, for as soon as the queen reaches them the bees will be likely to uncap the honey, and remove it to the sections, and thus as much of the combs be filled with brood as her prolificness requires. If the honey in these capped combs is not of the same consistency and color as is that coming in from the fields, you will be likely to get a mixed product in your sections which will injure the sale of it and cause dissatisfied customers.

G. M. DOOLITTLE.



MR. J. K. DARLING.

The subject of this sketch was born within 15 miles of the city of Kingston, Ont., in 1843. The country was then new, and he can well remember hearing the wolves howl around the house during the night. He did not have the advantages of securing an education that the boys of the present day are surrounded with; however, by making a good use of the means within his reach, he acquired what might be termed a good, common school education. He was brought up on a farm, and a bush-farm at that. Being the oldest of a family of nine, it fell to his lot to do a large share of the "chores," and as part of his father's stock consisted of a few colonies of bees in box-hives, he had some acquaintance with them when quite young. He was frequently told to "watch the bees," and one of the first things he remembers was placing some pieces of boards over a swarm that had settled on a hill of corn. His father and mother were away from home, and a shower coming on, he was afraid the wet would drive them away.

Mr. Darling always liked the bees, and as he grew older he thought he could manage them as well as the most of the people whom he knew. He never read any bee-literature, because he did not have it, and did not know it was obtainable. When he was 20 years of age he could break and cut the old black combs from a box-hive, or perchance a salt-barrel, in April—"to give room for the summer's work, you know," just

as deftly as almost any other person, and he was just as clever in placing over the "brimstone pit" in the fall any colonies that were thought to be too light to winter. Those were the days of "strained honey."

After leaving home Mr. D. did not have much to do with bees for 12 or 15 years, but he had not lost his old love—it was just lying dormant. He went to Almonte, Ont., in 1870, and built the house he now lives in. He often thought of bees, but living in a village he thought put an end to his aspirations in that direction, especially as he was engaged in one of the woolen mills, which took his time from 6:30 a.m. to 6 p.m. However, somewhere about the year 1880, the old love blazed up more fiercely than ever before, and he "got the fever," and had it bad. He thinks Wm. F. Clarke was mostly too blame for this, for he was then writing for the Montreal Weekly Witness.

In the spring of 1882 Mr. Darling paid \$5.00 for a strong colony in a box-hive. It swarmed twice, and the old colony became queenless. He sent for a few hives, an extractor, smoker, etc., and an Italian queen for the queenless colony. The man he purchased the colony from had some that were too light to winter, and said if Mr. D. would leave him the honey and hives, he could have the bees and combs. He extracted the honey, and putting three light colonies together, gave him a fairly good colony, but not an ounce of honey, and none to gather, as the frost had killed everything. He fed granulated sugar syrup, and had it sealed over most beautifully, and put the four colonies into the cellar for the winter. In the spring the second swarm "played out," as well as the old colony with the Italian queen. The prime swarm and the fed colony came out all right, and he never saw drier, cleaner combs in the spring than those in the colony that was wintered on pure sugar syrup.

That spring he bought 12 more box-hive colonies from the same man, and although it was the 21st of May, three of them dwindled out before the honey season, leaving him with 11 colonies at the commencement of the honey-flow. He increased them to 26, and sold \$100 worth of honey, which settled his determination as to keeping bees. He bought seven more box-hive colonies, and wintered the 33 without losing one.

The next season (1884) he increased to 51, and bought 8 more, making 59 which he wintered without loss. In 1885 he put away 110, which he brought through the winter, but one or two "kicked the bucket" shortly after being put out in the spring. Since that time he has lost more or less every winter, sometimes so many as to make him feel very sad.

Mr. Darling is not in the best locality for honey, and his average has been from 72 pounds per colony, spring count, in a good season, to one or two pounds per colony in a very poor season. His success in wintering has been better when there had been a better crop of honey, and poor when the honey crop was light; especially if what little he did get was gathered early in the season.

He sent a little more than half a ton of honey to the Indian and Colonial Exhibition held at Kensington, England, in 1886, which would compare favorably with the honey from the other parts of the Province. He was appointed one of the Directors of the Ontario Bee-Keepers' Association in 1888, which position he has held ever since, and last year he was elected Vice-President of that association.

As a politician Mr. Darling is not known. Of very strong and decided convictions personally, he prizes highly, and exercises with determination, his right of franchise, but his voice has never been heard at a political gathering, unless it might be in the cause of temperance. He was converted at the age of 12 years, and joined the Methodist Episcopal church, of which his parents were members. He has been an official member of the Methodist church for nearly 30 years, and has been an active worker in the Sunday school for nearly 25 years.

Mr. D. is now carrying on a garden of vegetables and small fruits, and doing the best he can with his bees, having left the woolen mill 10 years ago. He put away 140 colonies of bees last fall in fine condition, and hopes for good things another year. So do we all.

THE EDITORS.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for \$1.25; 100 for \$2.00. Better give them a trial. Send all orders to the Bee Journal office.

CONVENTION PROCEEDINGS

Report of the Illinois State Bee-Keepers' Convention Held at Chicago, Jan. 9 and 10, 1896.

REPORTED BY ERNEST R. ROOT.

The convention was called to order at 10 a.m., Jan. 9, by the President, Dr. C. C. Miller, and E. R. Root opened the meeting with prayer. The Secretary, Jas. A. Stone, being absent, Mr. Root was chosen Secretary *pro tem*. The President explained that there was no pre-arranged program, and that he would have to call upon the members to hand in questions. The first question for discussion was:

PLANTING FOR HONEY AND FORAGE.

"What, in your opinion, will prove the most profitable to plant for honey and forage? or what should we encourage as a honey-plant?"

Pres. Miller—I would not encourage planting for honey alone. As there are only a few here this morning, comparatively, I think we can get at the matter by calling for votes. First, let us have a list of the plants.

The various plants named were alfalfa, sweet clover, Alsike, crimson clover and buckwheat.

President—What is your first choice?

The responses showed that Alsike had the preference. When the second choice was called for, sweet clover was awarded the palm. On the third choice there was a division between crimson clover and buckwheat.

President—Alfalfa is a new plant, comparatively, and it is only lately that it has come into prominence.

Mr. Finch—I voted for alfalfa because Mr. Stone praised it very highly at our last convention.

Mr. Baldrige—I did not vote for it, because I never see any bees on it at St. Charles. It is not much of a honey-plant with us.

President—There was only one patch of it in my vicinity, but I found no bees on it.

Mr. Schrier—I sowed three acres of it four years ago. I was very anxious to see the bees work on it, but saw none.

Question—What do you know about Alsike?

Mr. Schrier—I sowed about 20 acres with Alsike. Some of my colonies stored as high as 100 pounds of comb honey, and the average from the whole yard was from 80 to 90 pounds per colony. It is a successful forage crop with me every season; and while the clover is not as large as the red, it makes No. 1 hay, and sells for more than the red. I should rather have it with timothy than alone. Without the timothy it sprawls on the ground, and does not grow as well.

Mr. Baldrige—Peck Brothers, of Geneva, are large sheep-growers. They sow all their land (about 200 acres) with Alsike and timothy, and have no bees.

President—That is the point. We want to emphasize, as bee-keepers, the forage side of our valuable honey-plants, because this appeals to the farmers.

Mr. Holmes—My experience is the same as Mr. Schrier's. At this point a recess was taken. The following paid their dues then and at various times during the meeting:

A. H. Kennan, LaGrange.	C. A. Stewart, St. Charles.
M. H. Mandelbaum, Chicago.	C. Schrier, Peotone.
Geo. Thompson, Geneva.	Wm. Blume, Norwood Park.
J. C. Wheeler, Plano.	E. R. Root, Medina, Ohio.
M. M. Baldrige, St. Charles.	J. Roorda, Thayer, Ind.
A. N. Draper, Upper Alton.	W. C. Lyman, Downer's Grove.
H. O. Miller, Manteno.	W. A. Norris, Aurora.
J. A. Green, Ottawa.	Geo. S. Affolter, Maywood.
Ephraim West, Channahon.	N. L. Stow, Evanston.
E. F. Schafer, Chesterton, Ind.	

There were a number of other bee-keepers present whose names were not recorded, some of whom had paid their dues at the Springfield meeting in November, 1895. After the recess, the subject of honey-plants was continued.

President—We will next turn our attention to sweet

clover. Now is your time to speak of it as a honey-plant, after which I desire to emphasize its value as a forage-plant.

Mr. Finch—The honey from it does not seem to be of first quality. People do not like it. I had some at the State convention at Springfield, and no one seemed really to like its flavor.

Mr. Baldridge—Was the honey light in color?

Mr. Finch—It was a light amber.

Mr. Baldridge—That could not have been from sweet clover.

President—Likes differ. We must go by the general taste. I have generally considered it to be very good in flavor.

Mr. York—I have samples that were produced a few miles from this room, that were very fine. The honey is light in color, but it has a sort of greenish tinge.

E. R. Root—Samples have been sent us at various times; and while we do not consider it quite equal to white clover, we call it a fine honey. It is light in color, though perhaps not quite so light as first quality of white clover. The honey that has been sent to us has come from a good many different localities, but all the samples seem to be very much alike.

Mr. Schrier—The honey is a little strong, and slightly yellowish, but good.

Mr. Baldridge—It is barely possible that your bees may have been working on other plants. That would account for the strong flavor and the dark color that you speak of. In my locality, nothing else is in bloom at the same time as sweet clover. The honey is both white and of fine flavor.

President—Let us now turn our attention to sweet clover as a forage-plant.

Mr. Baldridge—I have something on that subject, and I should like to read it. Sweet clover is grown for hay, for pasturage, and for enriching the soil. One farmer has 100 acres old enough to bloom the present year. In November, 1895, one of my sweet-clover correspondents in the State of Mississippi, a wide-awake and progressive farmer, wrote me substantially as follows:

SWEET CLOVER IN MISSISSIPPI.

"My farm contains 1,600 acres of land, and is all under fence; 300 acres are in pasture, 150 acres being seeded to common red clover, and 100 acres to sweet clover, the latter being of this season's growth. I think my sweet clover is almost a perfect stand. It will be old enough to bloom in 1896. I have at this time 150 tons of sweet clover hay, all under cover, and of this season's growth. My stock, both horses and cattle, seem to be very fond of the sweet clover hay, for they eat it as readily as that from the red variety. I do not grow the Alsike clover. I have never seen Alsike tried but once in my locality, and that was a complete failure, but I think I must give it another trial.

"I have kept, this season, 55 head of stock on 50 acres of sweet clover as pasturage, and besides I have cut and saved from it 50 tons of hay. My stock had all the pasture from the sweet clover they could eat, and they are now very sleek and fat. The plant makes such a rapid growth that the stock and mowing-machine could not keep it back. Of course, if I were to go into the field and cut the sweet clover all down at once, I might then use it up, but I simply cut small plats at a time, so as to let the stock graze all the time.

"I always cut sweet clover for hay, the second year, before it blooms, and when it is from 20 to 24 inches high. I do not think it would make as good hay after it blooms, as I fear it would then be too hard and woody. After it blooms I make no special use of the crop except to save it for seed.

"Sweet clover starts to grow very early in the spring—much earlier than red clover—and makes a very rapid growth. In fact, it is one of the earliest and most rapid-growing plants that I am acquainted with.

"I keep about 100 head of pure-bred Poland-China hogs, and I find that sweet clover is a good plant in early spring for hogs to graze upon; and that it is ready for them to use before anything else as pasture.

"I have also a large herd of thoroughbred Jersey cattle of both sexes; I graze them also on sweet clover. When given access to it in early spring, they soon become fond of the plant, and will then keep fat upon it.

"My horses do not seem to like sweet clover the second year until after it begins to bloom; they then eat the plant with great relish. But the first year's growth of sweet clover is the finest grazing-plant to fatten stock of any kind, that I ever saw, and especially late in the fall, when all other plants are gone. The plant is so hardy that it takes several severe freezes to kill it down.

"I sow from 8 to 10 pounds of seed, with the hulls on, to the acre. I prefer to sow the seed alone, or without a nurse-crop, and to sow it early in the spring or the latter part of

winter. If the land is free from grass and weeds, it makes no difference with me about its being plowed or the seed harrowed in; still, in many cases, it may be better or safer to harrow and cover the seed lightly. It may be sown on oat or wheat stubble, if so desired, and with good results. If I first plow the land I then harrow so as to make it as smooth as possible before I sow the seed. Early seeding is very desirable so as to catch the spring rains. This insures the early germination of the seed, and, of course, a rapid early growth of the plants. After the roots once secure a foothold, sweet clover will then withstand almost any summer's drouth.

"There is perhaps no plant grown that will enrich badly worn soils more rapidly than sweet clover. The roots are large, and they go down to a great depth. The roots die and rot, as a rule, as soon as a crop of seed matures, and then the soil becomes filled with a large amount of decayed vegetable matter. If the land be then plowed, and seeded to grain, or planted to corn, an increased yield will surely be the result. The cultivation of corn will destroy any plants that may spring up from the seed of the sweet clover left on the ground. When young, the sweet clover plants are thus very easily destroyed. But by sowing oats, barley, wheat or rye, the sweet clover plants will not, of course, be disturbed, and after the crop is removed the land will usually be found nicely re-seeded, which, with me, is very desirable. But if the sweet clover be no longer desired, the land may be plowed up and seeded again to a grain crop.

"The growing of a crop of sweet clover until a crop of seed matures seems to have about the same effect upon the soil as tile-drainage. The roots, being long, and of large size, when they die and rot, leave a multitude of holes in the soil, and these act as drains for the surplus water."

Mr. Baldridge—We have a farmer near the Peck Brothers, who makes a business of cutting sweet clover and feeding it to his hogs. The road commissioner of that vicinity wanted him to destroy it; but instead of doing this he made a contract to pasture the highways. He hired a boy, and put on 35 cows, and cleaned up four miles of road. The cows ate the sweet clover, and the milk was of finest quality. The venture was a paying one all around. The milk paid well, and he was also paid under contract to pasture down the "noxious! weed." But he has not been able to renew his contract since.

Mr. Wheeler—I sowed sweet clover along where wild grass grew. About half of it came up. A neighbor wanted me to cut it down, as he thought it was a noxious weed. The horses refused to touch the wild hay or grass, but would eat the sweet clover. The clover I used for feed, and the grass, cut at the same time, was used for bedding. The horses formerly ate the wild grass.

Some discussion here followed, showing that sweet clover sometimes fails to grow in nice, mellow fields; but it seems to thrive well on waste lands, roadsides, and railway embankments. The question was asked why it did not grow in the fields, and yet would seem to thrive along the roadsides. The suggestion was made that the tramping-in of the horses and wagons along the roadsides caused the seed to be thoroughly covered.

Mr. Thompson—In my greenhouse I sowed some sweet clover in a box. It did not grow at all. The next spring I threw it out; and later on I saw a great bunch of sweet clover growing where I had thrown out the box of earth containing the sweet-clover seed. I came to the conclusion that the seed and the soil would have to be frozen before it will take root and grow.

Mr. Schrier—Sweet clover will not stand low ground.

[Continued next week.]

Back Numbers.—We have on hand a few back numbers of the Bee Journal for 1895, which we will mail to any one wishing them at 15 copies for 20 cents. They will all be different dates, but we have no complete sets for the year. Just send us 20 cents in stamps or silver, and we'll send you 15 copies. No doubt there are many new subscribers who will be glad to take advantage of this offer. All new subscriptions now begin with Jan. 1, 1896.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 25 cents; 100 for 40 cents; or 200 for 70 cents.



AMONG THE BEE-PAPERS

Uniting to Spot a Good Queen.

It has long been a "notion" in my mind that fall uniting furnishes about the only way we have to discover which of several queens is *really* the best—best queen sure to be the first one to get infuriated; and her antagonists are stung and dead before they get their fighting trousers on. I like to unite a half dozen or more colonies into one great one with just this object in view, to discover an extra nice queen.—E. E. HASTY, in Review.

Clipping Queens' Wings.

Some folks are still harping on the foolish theory that clipping the wings of queens will finally cause them to become permanently impaired, or even cause the disappearance of those members entirely. If every keeper in the land practiced clipping on all queens, there might be some logic in this kind of "argufyen" (as the negro said), and about the year 2599 our posterity might notice some of the bad effects, but even this is doubtful. I presume people have practiced cutting the finger-nails for many centuries past, but the most of us have finger-nails yet, unless we have been unfortunate enough to have dropped some heavy weight on one or more of them, and thus been temporarily deprived of them. So long as all queens sent out by breeders have wings, it is hardly necessary to send up a cry against clipping. I suppose these fellows get this idea from what scientists and naturalists tell us about the penguins and other fowls, and insects, losing the use of their wings because they get too fat and lazy to use them. Never mind! Whenever our queens commence coming out of the cells with cropped wings, we will quit cropping, for a year or two at least.—S. E. MILLER, in Progressive.

Wintering Bees—Weak Colonies.

Since we gave large entrances at the sides of the combs by raising one side of the hive, and putting under a half-inch block (our hives are not nailed, but clamped at the corners), we have lost no colonies if they were in proper condition when put into the cellar with queens and sufficient honey. From three or four, when being piled up in the cellar, the block came out, letting the sides down, which gave them only their front entrances at the ends of the combs. They all came through in bad condition, and most of them kept dwindling down, and died before white clover came, showing that close confinement makes bees unhealthy. We generally leave the honey-board on top of the frames, and lay on the second honey-board; the slats between make a dead-air space. They were put in the cellar about the middle of November. We like that time better than to wait longer, unless warm weather continues. In that case we watch the weather, and put in with the coming of cold wave.

We don't try to winter weak colonies, but unite; but on the weakest ones, in point of numbers, of the good colonies, so far as we can judge, we tie a red string, and set them in the center of the cellar, and leave them in the latest in the spring, not leaving any later than the 1st to 10th of April. Several springs, our cellar being so full, we would take some out the middle of March, and once the first of March, so we could keep the rest cool enough until about the 1st of April. Then we took out the greater part, but left some few in until the last of April. The last ones taken out gave but very little surplus honey, not having built up into strong colonies soon enough. Those taken out the first and middle of March were better than those left in until the last of April.—Mrs. L. C. AXTELL, of Illinois, in Gleanings.

Doolittle's Beginning.

When I first commenced bee-keeping I was greatly benefited by the writings of E. Gallup, M. Quinby, L. L. Langstroth, Adam Grimm, and many others, for by their writings I learned my A B C in bee-culture. My first year of bee-keeping resulted in 12 pounds of surplus box or comb honey and one swarm, from the two I bought to commence with in the spring. The next season I obtained about 25 pounds surplus

from each hive I had in the spring, on an average. The next season I conceived the idea that more honey might be obtained by making my hives smaller, as regards the brood-chamber, than were those then in use, so that year I placed dummies in a part of my hives, to take the place of three frames, or one-fourth of the room, as the hive I had been using held 11 Gallup frames. The hives thus contracted gave me a much larger yield of surplus honey than did the others left as I had formerly used them, so in the spring of the fourth season the larger part of my hives had dummies in them, and when the end of the season came I chronicled an average of 80 pounds of box honey, as the average surplus for each colony I had in the spring. During these four years I had studied, read and practiced all my wakeful hours, about the bees, for I never spent an hour in my life in work pertaining to bee-culture without its being a real pleasure to me. Many a night have I laid awake from one to three hours, planning how to accomplish some result I desired to achieve in regard to the practical part of apiculture. Although I had scarcely the advantage of a common school education, and was not versed in either grammar or writing for publication, I felt that I ought to write for the bee-papers, thereby adding the little I might discover from time to time, to the general fund of knowledge, thus helping others what I could, to pay in a small measure the debt of gratitude I owed for the instruction I had gained from the writing of others. So I began to write, and as the editor kindly fixed up my articles so that they were presentable I was encouraged to keep on, and to-day finds me still scribbling away, trying to tell what I know concerning practical bee-keeping.—G. M. DOOLITTLE, in Progressive Bee-Keeper.

Young Queens Breed Late.

We know that a great many bee-keepers practice requeening late in the summer after the honey-flow ceases. The question may well be asked: Is this a good practice in all localities? It is known that queens answering the above description continue to lay for a greater length of time after the honey-flow ceases and are generally more readily stimulated to brood-rearing. In some localities there is a scant fall pasture for bees sufficient to keep them breeding, and this is liable to be so late that young bees do not get a cleansing flight before they go into winter quarters. When you add to this a young queen the danger is very much intensified. A large number of our best bee-keepers are ready to admit that if the honey-flow stops after the linden flow, and there is no more brood-rearing, the bees retain in that quiescent condition their vitality. There is, as it were, in nature an evening up. No honey-gathering, no breeding, no, or little, loss of vitality; honey-gathering, loss of vitality and breeding. Again a still larger number admit that young bees must have a cleansing flight before going into winter quarters. If they do not get this flight they are restless, become diseased and die and probably disturb the older and well-matured bees in the hive, setting up disease and death. We should very much like to have the opinions and experiences of our readers on the above subject.—Canadian Bee Journal.

Weight of Bees, and Bee-Loads.

The editor of the Review, while admitting that it may be interesting in a scientific way to know the exact weight of a bee and the amount of nectar it can carry at a load, fails to see any practical benefit to the honey-producer. If our printed matter were to be confined simply to the methods for converting the labor of our minds and hands into bread and butter, and honey to put on it, some of the best literature of our bee-journals would have to be eliminated. Man does not live by bread alone, neither should he try to. The practical bearing on some questions is not always at once apparent.

In the case of the bee's weight, or the the weight of honey it can carry, there is a practical side. The knowledge of the average bee-load of nectar gives us the key to the solution of the problem of the number of bees necessary to carry a pound of nectar, and the number of trips that have to be made to the fields. Indirectly we learn how many workers a colony should have in order to get the best results from a certain honey-flow. But perhaps Mr. Hutchinson would ask, "How about the weight of a bee?" In order to know the weight of a bee-load we must know the weight of the bee itself.

Then, too, there have in times past been all sorts of rude guesses as to how many bees there were in a 10-frame colony. Our knowledge is now much more exact; and hence, in discussing practical questions—those that involve bread-and-butter-getting—our comparisons and our statements of bee-forces will be more in keeping with facts, and hence lead to more exact results.—Gleanings.

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EDITORIAL COMMENT

An Open Winter is what we have had in this locality so far (Jan. 25). We prefer a steady, cold winter, as we believe such is more conducive to good health. We have noticed that oftener "la grippe" attacks the people in mild, open winters. Ever since Jan. 1, we have been suffering from an insidious invasion of his "grippy lordship," and about concluded that either we had the grippe, or else the grippe had us—perhaps it is both combined. At any rate, we are quite willing to "part company" with our common enemy—Mr. Hold-on Grippe.

The California "Rambler" (known also as John H. Martin) begins a series of articles in this issue of the Bee Journal. He's better known to the readers of Gleanings, but we think very soon our readers will feel pretty well acquainted with him. His Bee Journal articles will have less of the rambling feature, and more of the practical in them.

With Prof. Cook and Rambler to represent them, the Pacific Coast bee-keepers and their interests should be well taken care of in the American Bee Journal. Both of them understand well the apiarian requirements in that region of our great country, and will no doubt see to it that bee-keeping matters there are placed in a proper light before the world. Our California and other Pacific Coast readers, we are sure, will hail with delight the articles from the pens of these two helpful apiarian workers and writers.

The Chicago Convention Report is begun this week, on page 69. It was hard work to report it, as it was, with one exception, *all discussion*, the only semblance of an essay being the letter on sweet clover, by Mr. Baldrige. As will be noticed, Mr. E. R. Root served as secretary, and we are sure all will agree that he has done his work exceedingly well, especially as he is not a shorthand reporter. Surely, a vote of thanks is due Mr. Root for his faithful services.

We regretted to see that so few of those present became members; also, that more of the local bee-keepers did not "turn out." Most of those located near Chicago had a fairly good crop of honey last season, and we fully expected to see them at the meeting. When a bee-convention comes so near to our homes, it seems to us we should attend if at all possible. You know "the more the merrier" applies particularly to conventions of any kind. We hope that hereafter whenever there is a bee-meeting held near the home of any bee-keeper, he will be present, and not only get as many more to attend as he can, but also pay the annual dues and become a member.

South Water Street Information.—In a recent Chicago daily newspaper we found the following about the condition of honey and the market on South Water street, where are located about all the dealers in farm produce:

HONEY IN DEMAND.—"Good white clover honey is always in demand," said a South Water street commission-dealer yesterday. "The supply this year is well up to the average yield, which is never heavy. Prices are from 12½ to 13 cents a pound. Don't always think that honey is adulterated because of its color. Clover yields the only white honey. Buckwheat colors the honey until it is as dark as any adulteration dare be. One of the prettiest honeys is the amber, which is the result of the bees feeding on the basswood flowers."

Of course the great (?) honey-man was speaking about comb honey. It will be news to most bee-keepers that "Clover yields the only white honey!" And that amber honey "is the result of the bees feeding on the basswood flowers!" Wonderful is the beginner in the honey-commission business! The above is almost equal to the idea discovered in the cranium of one new honey-dealer the past fall, who thought that because a few cans of honey had become granulated, it must be adulterated! Oh, what a vacuum in that fellow's head! And yet, he wanted to be considered a big honey-dealer!

Beeswax Exhibit and Metheglin.—A Connecticut subscriber asks the following questions:

1. Will some one please tell, through the Bee Journal, how to put up beeswax in fancy shapes for exhibiting at fairs?
2. Can metheglin be made of honey-dew?

Any one who can answer the above is requested to do so. As Mrs E. Whitcomb, of Friend, Nebr., has been very successful in making beautiful beeswax things for exhibition purposes, perhaps she will kindly tell how she does it. And if we remember rightly, Mr. Whitcomb knows something about metheglin—maybe not about the *taste* of it!—but whether honey-dew would be suitable for that purpose. But why not make honey-vinegar instead of metheglin? There are too many intoxicating drinks already, we think.

The Apiarian Industry in the United States is a development of the last 40 years, although isolated individuals were engaged in this work long prior to that time. The importance of the industry at the present day is not generally realized, and the following figures will probably be surprising to many well-informed individuals:

Apiarian societies in the United States.....	110
Apiarian journals.....	9
Steam factories for the manufacture of bee-hives and apiarian implements.....	15
Honey produced in the United States in 1869 (according to United States Census Report)..... pounds..	14,702,815
Honey produced in the United States in 1889 (according to United States Census Report)..... pounds..	63,894,186
Persons engaged in the culture of bees (estimated).....	300,000
Honey and wax produced, at wholesale rates (Eleventh Census).....	\$7,000,000
Estimate of the present annual value of apiarian products.....	\$20,000,000

The above is taken from a circular recently sent out by the Department of Agriculture, at Washington, D. C. While some of the foregoing figures may be correct, it is pretty safe to say that others are hardly reliable. In fact, it is very difficult to get at the actual figures when it comes to a subject of this kind. For instance, look at these two paragraphs, which are based on Government Reports of the honey crop:

In 1869 five States produced over 1,000,000 pounds each, and seven States produced none. Illinois led with 1,547,178 pounds, and North Carolina followed with 1,404,040 pounds. South Dakota producing the least—110—of those that produced any at all; Nevada followed with the next least amount credited to one State, 363 pounds.

In 1879 two States, New York and Tennessee, produced each over 2,000,000, and ten other States produced each, over 1,000,000 pounds. Illinois produced 1,310,138, and North Carolina 1,591,590 pounds; South Dakota produced 6,180, and Nevada 24,296 pounds. New Mexico produced the least, 450 pounds, and only four states produced none.

Now, just compare the honey produced in Illinois with that of North Carolina, as given in the Reports. Who believes that the latter State in any year produces one-tenth as much honey as the former? And yet, in 1879 the figures show that North Carolina produced more honey than Illinois! and in 1869 almost as much. It

will also be seen that California isn't found at all among those worthy of special mention.

But here is another paragraph touching on the honey-yields for 1889:

In 1889 one State—Iowa—produced over 6,000,000 pounds. Three States—New York, Illinois and Missouri—produced each over 4,000,000 pounds. Three States—Texas, Wisconsin and California—produced each 3,000,000. Seven produced each, over 2,000,000, and six over 1,000,000 pounds each. Every state produced honey, the least being Montana, the next Wyoming, which produced 305 pounds. Idaho, which produced none in 1869 or 1879, records 37,146 pounds for 1889.

In the above, it shows that Iowa produced just twice as much honey as California in 1889! We're afraid the apiarian statistics of the past need revising. We hope the Government will take hold of the matter in real earnest, and see to it that proper apiarian reports are gathered in the same manner as those relating to other productions of the farms of our country. We think a few questions relating to bee-culture should be printed on all blanks used by assessors who annually make their visits among those who produce honey and many other crops.

Questions AND Answers

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Does Feeding Bees Sugar Affect their Gathering from Flowers?

There is an old German proverb which says: "Bienen die mit Zucker gefuettert werden hoeren bald auf Honig in den Blumen zu suchen." Translated it reads: Bees that are fed with sugar soon stop gathering honey from flowers. I would like to know how much truth there is in it? J. S.

ANSWER.—I don't believe there's anything in it. For some reason bees prefer the nectar of flowers to any solution of sugar, and if you feed them the latter when no flowers are to be found, they may take it greedily, but as soon as they find a chance to gather the genuine nectar, they will quickly neglect the sugar. I could never observe that bees worked with any less vigor on flowers after having been fed upon any substitute. In the same way I have seen bees working very industriously on some substitute for pollen, as ground corn and oats, but as soon as natural pollen was to be had the meal was deserted, and the bees worked with a will bringing in great loads of pollen.

Two-Story Eight-Frame Hives—Objects to Bee-Zinc.

On page 810 mention is made of ten colonies of bees in two-story 8-frame hives, and the following questions were asked about them:

1. When were the second stories given, or were they on all the season?
2. How strong were the colonies in the spring?
3. How were they in the fall?
4. What was the crop?
5. Can you tell us how they compared with one-story colonies?

6. Were they run for comb or extracted honey?

To these questions H. E. L. replies as follows:

ANSWERS.—1. The second stories were put on in spring to increase the laying-room of the queen, and they are there yet as a two-story hive for winter. This is the first season's trial with the two-story hive (I mean two-stories for the queen and her brood).

2. On an average, weak and short of stores.
3. Very strong and very heavy.
4. 50 pounds per colony, not forgetting that the season was very poor. A near neighbor did not average 25 pounds in

his apiary, beside leaving all colonies with less than half as much as my colonies have left to winter on.

5. The above explains this question, as he confined all his colonies (the queen rather) in the one lower story by means of a queen-excluder above it, and a second-story for extracted honey. The queen-excluder, to my notion, is to the queen what the chain is to the dog, besides being a stumbling-block for the poor loaded bees to stumble over, that is, squeeze through the close-fitting opening. Who can tell how much honey is lost by the use of those expensive excluders?

6. All were run for extracted honey, three and four stories, the strongest one having at one time five stories.

East St. Louis, Ill.

H. E. L.

ANSWER:—Like many another thing that is good, I suppose bee-zinc may be abused as well as used. Comparing your results with those of your neighbor, it looks very much as if it has been a damage to him, that is, supposing there was no material difference between your management and his except the matter of queen-excluders. Used with judgment, however, bee-zinc is certainly a grand invention. Just how much harm is done by forcing worker-bees to pass through the perforations I suppose it would be difficult to determine.

One can judge perhaps something about it by having bee-zinc at the entrance of a hive and watching the bees as they pass through it. At first it seems something new to them, and they don't pass in and out of the hive as readily as without it, but after a day or so it seems to make very little difference. Only by a good deal of observation and comparison could one tell very much about its use in the case of extracted honey. If you had used excluders over your second story it is possible there might have been some good in it in the way of keeping the queen out of the combs used in the extractor and also keeping pollen out of them. Still, it is possible that there may be some advantages in allowing the queen free range. Will you kindly tell us, if you can, about how many combs of brood were in the hive at the height of the season, and whether the brood was spread throughout the several stories or in which stories it was? Also tell us how many of them swarmed. Thanks for the information already given.

Does Artificial Pollen Ferment in the Cell?—Is it Paralysis?

1. Does common wheat flour or meal, used as a substitute for pollen in early spring, undergo fermentation when the bees fill up the cell, in which it has been stored, with new honey?

2. When bees are busily working on the second crop of red clover I notice that many of them are affected by what seems to be "paralysis." Is the trouble due to the nectar-secretions of the clover, or is the weather accountable, being at that time extremely warm and dry?

W. W. M.

Wheelerburg, Ohio.

ANSWERS.—1. Probably no more than the natural pollen. Pollen or any of its substitutes may undergo fermentation under favorable circumstances, but not when properly taken care of by the bees. I've seen what was supposed to be good extracted honey froth and run over the jar that contained it, on account of the floating pollen in the honey.

2. I don't suppose the clover has anything to do with it. If bee-paralysis is what you mean, that's a disease that opinions are unsettled about at present, further than it is due to a bacillus, and there's no certainty that the weather is in any way accountable for it.

Swarming Out—A Stray Queen.

1. I have a colony of bees which are cross and bad to handle. They will pitch at you if you are not any where near the hive yourself. They were the first from a swarm of very quiet bees, and they have been very cross ever since they lived in this hive.

2. Last spring I had a colony in a 10-frame Langstroth hive with plenty of honey and nice, clean combs, but they swarmed out. I tried to stop them and make them cluster, but it was impossible—they would not cluster at all. I threw water into them, but no use. They flew for about one hour, and then went northwest to a neighbor's apiary and settled on a wash-tub half filled with water for watering bees. I of course followed them and got them back home again, and then into the same hive again. Then the queen began to lay all right, but in about a week they swarmed out again, leaving hive, honey and brood. They went right over to the same neighbor

again, and lit on an apple-tree; so I got permission from him to cut the limb from the tree and take my bees again. I got them down and hived them in a new hive with full sheets of foundation but the next day out they came and were gone entirely. I saw nothing of their leaving the hive at all. But what was strange to me was, when we were eating dinner we found a queen on the window trying to get out. Now, where did that queen ever come from in the house? Was it the queen of the colony that left? If it was, where were the bees gone? This happened on May 7, 1895. H. W. S. Baraboo, Wis.

ANSWERS.—1. From the date given, it might be impossible for any one to say just why the colony was cross. You say it was a first swarm from a gentle colony. In that case it had the same queen the old colony had, and for at least three weeks there would be no bees in it except those that came from the old colony. So the difference can hardly be accounted for by the change of bees themselves, as might be more or less the case with a second swarm.

If honey ceased to yield immediately after the swarm was hived, that might account for an immediate change of temper in the bees.

If the bees lost their queen by any accident, or even by design, that would change their gentle character also.

The place where the new swarm was put may possibly have had something to do with it, for some have reported that bees out in the hot sun were more vicious than those more comfortably located.

2. It is simply impossible for any one to say with certainty from whence came that queen. It is possible that it might have come from a colony at almost any distance within two or three miles, and from any point of the compass. The fact that one of your colonies came out of its hive makes it of course more probable that it was from such a colony than from a colony that remained quietly in its hive as a well-behaved colony ought to do; but after all, any answer given would only be a guess.

Improved Nomenclature—Bee-Zinc.

Some honey-boards are queen-excluding, others not; then suppose that those which are queen-excluders be called "bee-boards," and leave the old name to those which are honey-boards and not queen-excluding.

Zinc being the material which is in general use—I might say almost universal use—for excluding or including queens and drones, at other places than where honey-boards are used, and most honey-boards are made of zinc if they are queen-excluding, how would "bee-zinc" do for the "perforated zinc," as it is now called? A FRIEND.

ANSWER.—It is something of a question whether "bee-board" could displace the well-established name "queen-excluder," but decidedly "bee-zinc" has strong claims as a supplanter of "perforated zinc." The name is shorter, more descriptive, and could not be misunderstood. "Perforated zinc" might equally as well apply, and very likely if applied, to many forms of zinc with perforations that would not be perforated zinc at all in bee-keeping parlance. But "bee-zinc" would easily recommend itself as meaning just the one thing. Let's call it bee-zinc. [We are willing to adopt this change, and for the reason given.—EDITOR.]



CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—EDS.]

Balling Queens.

DR. BROWN:—On Oct. 1, as I was passing through my apiary, I discovered one hive with a pile of dead bees in front

of the hive, also a lump of live ones, so I searched the hive, and the bees were just wild. Then I took a stick and wanted to find out about the bees in front of the hive, and found a queen in the middle of a tight lump of bees, and as soon as I took the queen some of the bees were fighting and trying to sting the queen, so I caged her, and yet the bees were not satisfied. I found another lump just like the first, which I examined, and, to my surprise, I found another queen. Well, I caged her, and not long after that the bees went straight to work again. What was the matter with that colony? Could I not have kept those two queens until spring, if I had fed them honey mixed with sugar? They seemed to eat by themselves. I had no bees with them, as the bees would fight her if I put any with her. I had them in separate cages. If I had shut the cages and put them into some hive, would the bees have fed them through the wire-cloth and taken care of them? U. T.

Leon Springs, Tex.

ANSWER.—Judging from your description of the bees I infer that a swarm from some hive, or hives, tried to enter the other, and were killed, and the queen balled. Very often, with small, weak colonies, in the spring and fall, they swarm out and desert their hives, and frequently try to enter other hives. The fact of there being two balled queens would indicate two such swarms.

I have also had cases where the queen of the colony entered would be balled by the stronger bees, but in this case the bees would be demoralized for quite awhile. As the bees in your hive soon quieted down and went to work, this supposition would be very unlikely.

If you wanted to save the queens, you could have given them to some queenless colonies. The chances were all against you saving them in cages until spring.

Uniting Colonies—Feeding—The Danger of Extracting Too Closely.

1. Is there likely to be a gain by uniting several weak colonies in the fall? That is, will it make them swarm early, and put them beyond what they likely would have been?

2. I understand there is no use of packing bees for winter in the South; but as soon as they commence brood-rearing regularly in the spring, would it not be of some advantage to pack them so as to prevent the cool nights from chilling the brood, allowing them to remain so until the nights got fairly warm?

3. I have had my bees, from all appearance, within a week of swarming, when a cold, wet rain would set things back until they would not swarm at all. Now, what I wish to know is, would it be advisable to feed a little regularly just to keep up brood-rearing until the weather was right again?

4. The fall aster is our main honey-plant here. In extracting as fast as it is gathered, is there not danger of working the bees to death? This accords with what decides the life of a worker-bee. It seems that it would be at a critical time of the year; if so, what say you? J. W. H.

Newell, N. C.

ANSWERS.—1. There would be a gain by uniting them in this way; if you did not do it they would most likely be lost before the first of April. Small, weak colonies in the fall and spring frequently get, as it were, discouraged, and swarm out—desert their hive and what brood they have started. Feeding will not always hold them—it more often kindles their "git and quit" propensity. By uniting you save the bees, and may have a good, strong colony for spring work.

2. I don't think you would gain much by the packing. What you might gain in the night you would lose in the day. The bees in the packed hives would be several hours later in getting out in the day for forage than those in the unpacked ones. You would find that by the time the honey harvest was well under way, the unpacked bees would be most likely ahead. I speak from experience.

3. It would be advisable.

4. Yes, there is danger. The extracting should be done with judgment—always be on the safe side—don't extract too closely—leave enough for the bees to winter on, and to carry them until the first of April. From the first of February until the first of April is a trying time with bees in our climate—stores are rapidly consumed. Look out for starving colonies.

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Question-Box.

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Unqueening During the Harvest

Query 3.—Do you practice unqueening a colony during the honey harvest? If so, why?—TENN.

R. L. Taylor—No.

Jas. A. Stone—No.

H. D. Cutting—No.

G. M. Doolittle—No.

W. G. Larrabee—No.

Prof. A. J. Cook—No.

Mrs. L. Harrison—No.

Rev. E. T. Abbott—No.

W. R. Graham—I do not.

J. M. Hambaugh—No, no.

Mrs. J. N. Heater—I do not.

Eugene Secor—I never have.

Dr. J. P. H. Brown—No, sir.

Rev. M. Mahin—No, and I do not believe in it.

Dr. C. C. Miller—I gave it up some years ago.

B. Taylor—I have never made it pay to dequeen.

P. H. Elwood—Yes, when we do not wish to increase, we do it to prevent swarming.

C. H. Dibbern—No; I allow the bees to manage the requeening business, as I believe they know more about it than I do.

J. A. Green—Sometimes. In order to prevent or control swarming, and to keep colonies supplied with young queens.

Chas. Dadant & Son—No. It is too much trouble, and we do not consider it practical. There is lots more of this done on paper than in the apiary.

E. France—Some seasons we have caged queens during the honey harvest. I have not room here to explain the reasons why and when it should be done.

Allen Pringle—I practice no foolishness of that sort. It might possibly be wise for some bee-keepers in some localities to "unqueen," but it is otherwise with me and in my locality.

J. E. Pond—I unqueen a colony at any time, when I desire to make a change, without regard to the "honey harvest." I do not unqueen colonies, though, in the "honey harvest," with the intent to get more honey by so doing, as I think it doesn't pay to do so.

G. W. Demaree—No. I can bear the expense of rearing young bees during the honey-flow better than I can after the honey harvest is over, for there must be a succession of young bees if the colonies are to be in readiness to get their winter stores from fall bloom.

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General Items.

Results of the Past Season.

I had, spring count, 45 colonies, took off about 700 pounds of honey, mostly extracted, and sold 120 queens. I sold 35 colonies of bees, and now have 85 in fair condition. Bees are flying briskly to-day, and have been bringing in pollen up to within ten days.

I find it difficult to get queen-cells to hatch during the hottest weather. I have no use for queens reared here in winter. Spring is the best time, and early fall will do.

We are having more rain now than we had at this season a year ago, and I am hoping we will have a better honey season than the last was; and I would not object if the quality was a little better, and a little better market for what we do get.

O. H. STEVENS.

Bee Co., Texas, Dec. 20, 1895.

Two Fertile Queens in a Hive.

My report for the last four years is almost nothing. My bees run down from 72 colonies to 41, and averaged 200 pounds per year. No wonder I get discouraged and want to sell out and hunt a new location. I have kept bees since 1866.

I found two fertilized queens the past season. I went to the hive to put up a swarm for another person, and the second frame I took out had a young fertile queen on it. I set the frame in another hive, and went on with my work. When I got to the other side I found another fertile queen. I had found old queen-cells, and the old queen was gone, which was clipped. It is the only instance of the kind I ever heard of.

R. R. STOKESBERRY.

Clinton, Ind., Dec. 27, 1895.

The Bee-Pasturage in Montana.

My bees had a good flight Dec. 10, and are now in good condition for winter. There are lots of willow and wild berries growing near here for the bees to work on in the spring, and then come the aster and other wild flowers. I think most of the honey that I will produce next year will be from that source. I will improve my bee-pasture by sowing sweet clover.

FRANK X. ADELBERT.

Kalispell, Mont., Dec. 26, 1895.

Poor Season in 1895.

There is no honey to sell among the bee-keepers around here, and no young swarms in the summer of 1895, either. Half of the bees' winter food is from sugar. My bees used 10 pounds of honey per colony from May 15 to Aug. 1, then they got their feed in 10 days; then in two weeks gained a little. They had September brood, and I hope they will be all right for 1896. We had a young winter from May 10 to the 13th—too much for basswood. It was so hot and dry in the autumn of 1894 and summer of 1895 for clover.

O. E. CLARK.

Brillion, Wis., Dec. 26, 1895.

The Closed-End Frame in Winter.

On page 798, Mr. E. T. Abbott says he is unable to see where the closed-frame has any advantages in retaining the heat of the cluster in the spaces occupied. He says the cluster warms the spaces occupied and no more, let the frame be what it may. I use closed-end frames, and put foundation in them, and I find that the combs are built from end-bar to end-bar of the frame. I cover the top of the frames with a piece of strong cotton-cloth, which the bees seal air-tight. As the warm air of the cluster can neither escape at the top nor at the end of the combs, and being lighter than the air at the bottom of the frames, it is com-

pelled to remain in the upper part of the comb-spaces occupied by the bees. I have also some open-end frames in dovetail hives; in those I use foundation also, and the comb reaches also from end-bar to end-bar; they are Hoffman frames, and are closed-end about three inches; below they are open, and right there is where the warm air escapes and moves on into the parts of the hive not occupied by the cluster. I believe the Hoffman frame would be a great deal better if it was made closed-end at least half of the length of the end-bar, and kept wedged close so as to retain the heat of the cluster.

E. H. GABUS.

Brock, Nebr.

Retailing Honey in California.

I was in Los Angeles this week, and a lady told me that a man had been at her house peddling honey, and he asked 20 cents a pound for extracted honey in pound jelly-glasses. Besides, the glasses must be returned. Somebody must be making something on honey, if the bee-keepers are not.

ELLEN C. BLAND.

Fernando, Calif., Dec. 20, 1895.

A Healthy Old Bee-Man.

I had 9 colonies, spring count; I saved 14 good, strong swarms, and 3 after-swarms went away. They stored 275 pounds of surplus honey, and filled their hives so full that I could hardly lift them.

I am very much pleased with the American Bee Journal. I take great pleasure in working among my bees. I will soon be 73 years old. If all my pains and aches were put together, four weeks would cover them all.

S. C. COULSON.

Storm Lake, Iowa, Dec. 30, 1895.

May Revive the Clover.

I have my bees all in the cellar. The winter remains open and warm for this climate. On Dec. 24 and 25 we had two inches of rainfall, ending with a light fall of snow. It is the first rain to start the water in two years. This rain may revive the clover, but I fear that it is almost destroyed with the last year's drouth. So the outlook for next year is very slim indeed. All that the bees can build up on is the fruit-bloom, and this is not much of a country for apples or cherries, but a considerable quantity of small fruit.

D. C. WILSON.

Viola, Iowa, Dec. 27, 1895.

Very Dry Season.

Last year was a very hard one on bees in this part of the country. The winter killed almost all of my bees, and what I had left did not get enough to keep them. It was so dry, and at the present time almost all of the springs and wells are dry. Our well is almost gone. We can hardly get more than about one-third of a bucket of water at a time; but we had a fine rain last night, though I don't think it will make much difference in the springs.

WM. Y. STACKHOUSE.

Zermatt, Pa., Dec. 23, 1895.

An Arkansas Report.

Bees did very well this year in this part of the country—about an average crop. There are two crops to work for here, one in the spring, and one in the latter part of the summer and fall. We always get some honey every year. I never knew both crops to fail entirely. This year the bees swarmed a good deal in the spring, as they always do. The spring crop of honey was good, but it was a little dark. The persimmon tree, from which we get our best and whitest honey, failed this year. It begins blooming about the first of May, and lasts about three weeks.

The bees did not swarm much the latter part of the summer, as they generally do. Bees swarm a good deal in August here,

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4A2t J. P. H. BROWN, Augusta, Ga.

FOR SALE.

ALSIKE, CRIMSON, ITALIAN, ALFALFA, or WHITE CLOVER SEED.

4A8t WM. CRAIG, Luce, Mich.

WANTED—200 Colonies of Bees and 4-FRAME NUCLEI, on Simplicity or Hoffman frames, in exchange for Supplies, to be shipped either from here or Medina, Ohio. Send for Catalog to—**GEO. E. HILTON,**

4E4t FREMONT, MICH.

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Mention the American Bee Journal.

and if the season is good they are worth a good deal to gather the late crop of honey.

The bees are in good condition for winter. We do not need to feed, as they always store plenty to winter on. They winter well out-doors in single-walled hives. We use the dovetail hive, and think that eight frames are enough for the brood-nest for the ordinary colony of bees in this locality. We have 225 colonies, and run them for comb honey. About half are Italians, and half Italian-hybrids. It is hard to keep them pure on account of so many wild bees, which are mostly blacks. We are located about half a mile from the White river bottom.

A. J. BONHAM.

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Our bees gave us only about 1,100 pounds of comb honey the past season; in 1894 about 3,400 pounds of comb honey. The last was the poorest season for honey we have had in 10 years. The hard spring frost spoiled the best prospects we ever had for early honey. We get lots of honey from the black walnut trees here. The asters never yield any honey to speak of. Our bees always get plenty of fall honey to winter on, without being fed.

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M. A. BRADFORD.

Latourell Falls, Oreg., Dec. 21, 1895.

Too Dry for Much Honey.

The year of 1895 was very dry here, and we did not get much honey. I had 8 colonies in the spring, increased them to 17, and sold about \$40 worth of comb honey. I use the Langstroth hive, and like it the best of any I have seen yet.

We have a nice lot of basswood here, and clover and golden-rod. DAMON CHESLEY.

Jackson, N. H., Jan. 1.

Report for 1895.

I have 180 colonies of bees, and secured 2,000 pounds of comb honey from them the past year, for which I received 10 cents per pound.

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Bees did no good in this locality this year, on account of heavy rains in the spring, and excessive drouth in the summer. They gathered only about enough honey to carry them through the winter.

T. R. GREENER.

Grapevine, Tex., Dec. 18, 1895.

Some "Knows" and "Don't Knows."

I know that eight frames for a brood-chamber is too small for the best results in comb honey. I may tell why at some future time.

I know that a black hat on one's head in the bee-yard is not the best thing if the bees are at all cross. Try a light-colored hat, and then a black one, and see if I am not right.

Don't try to pack your bees to keep them warm. Leave them open to the south, and they will get the warmth from the sun, which will do them more good than pack-



IT'S RELIABLE
The Best and Cheapest Mill on Earth. Fully warranted. Will not choke. Write at once for prices and Agency. Prices lowest. Quality best.

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Being the cleanest is usually worked the quickest of any Foundation made

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Poultry Guide for 1896. Finest book ever published, contains a nearly 100 pages, all printed in colors, plans for best poultry houses, sure remedies and recipes for all diseases, and how to make poultry and gardening pay. Sent post paid for 15c. John Bausher, Jr., box 94 Freeport, Ill.

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- 2—A 50 cent copy of "Business; or How to Reach and Talk to the People." Postpaid. "An ideal little manual."
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C. N. Bowers, Box 24, Dakota, Ill.

52A1 Mention the American Bee Journal.

COMB FOUNDATION WHOLESALE and RETAIL.

Are you going to buy Foundation for Cash, or have you Wax to sell or trade for Foundation and other Supplies? Have you 25 lbs. or more of Wax that you want made into Foundation? If so, do not fail to write me for samples and prices. I make a specialty of working up Wax by the lb., and do it very cheap during the winter. Beeswax wanted at all times.

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf

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5Dt1f Please mention this Journal.

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111 to 122 S. 6th St., Quincy, Ill.

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1D6t GREENVILLE, OHIO.
Mention the American Bee Journal.

READERS Of this Journal who write to any of our advertisers, either in ordering, or asking about the Goods offered, will please state that they saw the Advertisement in this paper.

General Items.

Results of the Past Season.

I had, spring count, 45 colonies, took off about 700 pounds of honey, mostly extracted, and sold 120 queens. I sold 35 colonies of bees, and now have 85 in fair condition. Bees are flying briskly to-day, and have been bringing in pollen up to within ten days.

I find it difficult to get queen-cells to hatch during the hottest weather. I have no use for queens reared here in winter. Spring is the best time, and early fall will do.

We are having more rain now than we had at this season a year ago, and I am hoping we will have a better honey season than the last was; and I would not object if the quality was a little better, and a little better market for what we do get.

O. H. STEVENS.

Bee Co., Texas, Dec. 20, 1895.

Two Fertile Queens in a Hive.

My report for the last four years is almost nothing. My bees run down from 72 colonies to 41, and averaged 200 pounds per year. No wonder I get discouraged and want to sell out and hunt a new location. I have kept bees since 1866.

I found two fertilized queens the past season. I went to the hive to put up a swarm for another person, and the second frame I took out had a young fertile queen on it. I set the frame in another hive, and went on with my work. When I got to the other side I found another fertile queen. I had found old queen-cells, and the old queen was gone, which was clipped. It is the only instance of the kind I ever heard of.

R. R. STOKESBERRY.

Clinton, Ind., Dec. 27, 1895.

The Bee-Pasturage in Montana.

My bees had a good flight Dec. 10, and are now in good condition for winter. There are lots of willow and wild berries growing near here for the bees to work on in the spring, and then come the aster and other wild flowers. I think most of the honey that I will produce next year will be from that source. I will improve my bee-pasture by sowing sweet clover.

FRANK X. ADELBERT.

Kalispell, Mont., Dec. 26, 1895.

Poor Season in 1895.

There is no honey to sell among the bee-keepers around here, and no young swarms in the summer of 1895, either. Half of the bees' winter food is from sugar. My bees used 10 pounds of honey per colony from May 15 to Aug. 1, then they got their feed in 10 days; then in two weeks gained a little. They had September brood, and I hope they will be all right for 1896. We had a young winter from May 10 to the 13th—too much for basswood. It was so hot and dry in the autumn of 1894 and summer of 1895 for clover.

O. E. CLARK.

Brillion, Wis., Dec. 26, 1895.

The Closed-End Frame in Winter.

On page 798, Mr. E. T. Abbott says he is unable to see where the closed-frame has any advantages in retaining the heat of the cluster in the spaces occupied. He says the cluster warms the spaces occupied and no more, let the frame be what it may. I use closed-end frames, and put foundation in them, and I find that the combs are built from end-bar to end-bar of the frame. I cover the top of the frames with a piece of strong cotton-cloth, which the bees seal air-tight. As the warm air of the cluster can neither escape at the top nor at the end of the combs, and being lighter than the air at the bottom of the frames, it is com-

pelled to remain in the upper part of the comb-spaces occupied by the bees. I have also some open-end frames in dovetail hives; in those I use foundation also, and the comb reaches also from end-bar to end-bar; they are Hoffman frames, and are closed-end about three inches; below they are open, and right there is where the warm air escapes and moves on into the parts of the hive not occupied by the cluster. I believe the Hoffman frame would be a great deal better if it was made closed-end at least half of the length of the end-bar, and kept wedged close so as to retain the heat of the cluster.

E. H. GABUS.

Retailing Honey in California.

I was in Los Angeles this week, and a lady told me that a man had been at her house peddling honey, and he asked 20 cents a pound for extracted honey in pound jelly-glasses. Besides, the glasses must be returned. Somebody must be making something on honey, if the bee-keepers are not.

ELLEN C. BLAND.

Fernando, Calif., Dec. 20, 1895.

A Healthy Old Bee-Man.

I had 9 colonies, spring count; I saved 14 good, strong swarms, and 3 after-swarms went away. They stored 275 pounds of surplus honey, and filled their hives so full that I could hardly lift them.

I am very much pleased with the American Bee Journal. I take great pleasure in working among my bees. I will soon be 73 years old. If all my pains and aches were put together, four weeks would cover them all.

S. C. COULSON.

Storm Lake, Iowa, Dec. 30, 1895.

May Revive the Clover.

I have my bees all in the cellar. The winter remains open and warm for this climate. On Dec. 24 and 25 we had two inches of rainfall, ending with a light fall of snow. It is the first rain to start the water in two years. This rain may revive the clover, but I fear that it is almost destroyed with the last year's drouth. So the outlook for next year is very slim indeed. All that the bees can build up on is the fruit-bloom, and this is not much of a country for apples or cherries, but a considerable quantity of small fruit.

D. C. WILSON.

Viola, Iowa, Dec. 27, 1895.

Very Dry Season.

Last year was a very hard one on bees in this part of the country. The winter killed almost all of my bees, and what I had left did not get enough to keep them. It was so dry, and at the present time almost all of the springs and wells are dry. Our well is almost gone. We can hardly get more than about one-third of a bucket of water at a time; but we had a fine rain last night, though I don't think it will make much difference in the springs.

WM. Y. STACKHOUSE.

Zermatt, Pa., Dec. 23, 1895.

An Arkansas Report.

Bees did very well this year in this part of the country—about an average crop. There are two crops to work for here, one in the spring, and one in the latter part of the summer and fall. We always get some honey ever year. I never knew both crops to fail entirely. This year the bees swarmed a good deal in the spring, as they always do. The spring crop of honey was good, but it was a little dark. The persimmon tree, from which we get our best and whitest honey, failed this year. It begins blooming about the first of May, and lasts about three weeks.

The bees did not swarm much the latter part of the summer, as they generally do. Bees swarm a good deal in August here,

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E. M. PRATT,

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Self-Help Supplies.

ing, and they will come out stronger in the spring than if packed all around. At least mine do.

I know that a cross between the Italians and blacks are the best honey-gatherers for me that I have tried.

I don't know how bee-keepers that have a three-months' honey-flow keep their bees from crowding the queen out of room for laying eggs enough to keep the colony strong, with only eight frames for a brood-chamber.

I don't know why bees do not swarm in August, when there is a good honey-flow, the same as in the spring, if they don't reason. I know some say their bees swarm late in the fall, but mine do not.

For a cough try this: Take half a tumbler of extracted honey and the yolk of an egg; stir well before taking, and see how quick it will stop your cough.

G. E. NELSON.

Bishop Hill, Ill., Dec. 30, 1895.

Bee-Keeping "Away Up."

We are nearly 8,000 ft. above sea-level, and the past season the bees did finely. One objection is, they are "Mormon bees," and the way they believe in increasing is a sight! I believe they keep a good many "frows" in the same house, all the same.

Aspen, Colo.

S. M. BROYLES.

Sweet Clover and Alfalfa Honey.

Dr. Miller asks on page 3 what the quality of sweet clover honey is as compared with alfalfa honey. Here in Colorado we despise it, because it spoils the sale of our alfalfa honey, if mixed. After you eat alfalfa honey for awhile, and then get sweet clover honey, your liking for honey will be gone. It is so with me. Where bee-pasturage is scarce, as with me, of course a lot of sweet clover honey comes handy, if for no other use than for the bees; it would help out in the way of feeding.

Montclair, Colo.

S. M. CARLZEN.

A Poor Season in 1895.

The past season was a poor one in Otsego county. The frost and drouth were the cause, my average being but 20 pounds per colony, half comb and half extracted. But the bees are in fine condition for winter, with nearly all natural stores.

What have I learned? Well, I have learned that the flowers may bloom in abundance but yield no nectar. Our lindens were loaded with blossoms, supers were all ready, the sections filled with foundation, the bees had made a nice start on what clover and sumac there was, and we gave more supers, but, alas! we soon found that we must take them off again and feed some extracted honey to get the sections finished that were started before.

I never saw so much trouble in getting queens mated, and some were balled after they were laying. I had 4 colonies queenless in the fall, and a neighbor about one mile from me had 11.

The farmers around here have not made any more money than the bee-keepers, so I take fresh courage for 1896.

IRVIN GROVER.

Cooperstown, N. Y., Jan. 2.

Bees Did Fairly Well.

I put into the bee-cellar on Nov. 9, 1894, 34 colonies in good condition, and took out, the latter part of March, 1895, 30 colonies alive; I afterward lost two, and two others dwindled away, so they did not amount to anything only to build themselves up. They nearly all had dysentery when put out, and had spotted their hives more or less (some quite badly), but built up very rapidly on willow, maple and wild plum blossoms by May 9, when some of them were getting ready to swarm, but heavy frosts on May 11 and 12 killed the blossoms. By the latter part of June they had (or most of them) little or no honey in the hives, and were on

the point of starvation. Then the buck-bush commenced to bloom, and from that time on they stored pretty well until Sept. 1.

I increased to 57 colonies, had 4 skip for the woods, lost 4 from queenlessness, and took a little over 1,500 pounds of honey (not sections, but actual weight)—350 pounds extracted, and the balance comb honey. I have sold nearly 1,100 pounds of the comb at 12½ cents; extracted at 10 cents per pound.

I put 57 colonies of bees into the cellar Nov. 25, 1895, mostly in good condition, five or six, however, rather light in stores.

We had no white clover here to speak of last season, owing to the dry weather last year; and no basswood bloom on the low lands, and but very little on the higher land, on account of the heavy frosts in May; but the outlook now is good for another season—plenty of young clover; and basswood not blooming this season, it ought to bloom well next, if we have no frosts to kill it again.

I sowed 4 acres of crimson clover in October, but being late and dry it did not come up, so I look for nothing from that. I will try it again next season.

Long live the American Bee Journal. I want to see no department cut down, but would like to see them all enlarged; but how can a man ask it, when he is already getting more than his money's worth?

S. LAMONT.

Jarrett, Minn., Dec. 31, 1895.

Bees in Good Condition.

Bees are in good condition so far here. We had very fine weather the past fall—not as much rain as usual, but cold and dry. We have only had one inch of snow, and it was gone the next day, and only a little freeze in the mornings up to date. We look for our worst weather this month and next, but it looks now as if we may not have much snow this year.

G. D. LITTOY.

Tacoma, Wash., Jan. 2.

A Beginner's Good Work.

I started last spring with one colony of bees in an old round hive; I now have 9 colonies, all in dovetail hives. I introduced 16 queens the past season, and lost only two. How is that for the first year with bees?

JAS. W. WOODS.

Sallisaw, Ind. Ter.

A Beginner's Report.

I started with three colonies last spring, and increased to 10. Some of my swarms I found on trees near the roadside; I put them into a box and carried them home, and put them in an 8-frame hive of my own make. I am a beginner in the bee-business, and I intend to give it a trial, as I am a cripple, and not much good for anything else. I have five or six neighbor bee-keepers, all of whom keep their bees in box-hives; they all claim they are the best. One neighbor has his bees on a stand fastened to his hog-pen; another claimed the queen was the male bee, and that the workers lay the eggs. So much for a man that never reads a bee-book.

Our honey season was very good here until the middle of July, when a drouth set in, and the bees could find nothing to work on.

C. H. MAY.

Grove Hill, Va., Jan. 6.

Dr. Miller "On the Fence."

Say, Bro. York, I wish you would pull Dr. Miller off, for I imagined all the time that we were on the same side of the fence, and lo, and behold (on page 3), I find him astride of it, throwing stones, and I am hit, so here goes one back at him:

We Californians live some distance from the place where the last meeting of the North American Bee-Keepers' Association was held, so if we have drawn wrong conclusions or inferences as to its "admitted

failure," Dr. M. should hunt down its members.

"The North American has never been what its founders hoped that it would be; it is not representative, and if it cannot be made such, I think it might as well be given a decent funeral."—W. F. CLARKE.

"I doubt if the North American can ever be made a representative body."—Dr. A. B. MASON.

"It is useless to attempt to make the North American representative unless it is helped by Congress, and this will never be."—FRANK BENTON.

The above quotations are taken from the report of the Toronto convention, on page 648 (1895).

As to the Germans, Doctor, they as a class have the reputation of doing much and talking little; and if you (and others) who "look at the grand success of the German societies," had emulated them years ago, there would be no need of the North American attempting to work in the garb of the National Bee-Keepers' Union.

GEO. W. BRODBECK.

Los Angeles, Calif.

GIVING AWAY HIVES.

On all orders received before Feb. 15th for \$20.00 or over, we will send a "Half-Joint Hive," complete, ready for a swarm.

Send for '96 Circular.

I. J. STRINGHAM,

105 Park Place. NEW YORK, N. Y.

For Sale—A Bargain.

119 Colonies of Italian Bees in Chaff Hives. Good House, and 2 acres of Land, with excellent well of water. E. L. CARRINGTON.

5Atf PETTUS, Bee Co., TEX.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Jan. 18.—White clover and linden comb honey is scarce and commands a premium over other grades of white of 1 to 3 cents per pound. There is a fair supply of other grades, which bring 12@13c. for white, and amber to dark ranges at 9@11c. Extracted is without special change; the Western ambers at 4½@5c.; white, 5@6c.; clover and basswood in cans and barrels, 6@7c.

Beeswax, 28@30c. R. A. B. & Co.

CHICAGO, ILL., Jan. 20.—We are having good inquiry for fancy comb, but all other grades are selling slow. Dark comb will not sell on this market, and we would advise the producer not to ship it here. We are offering it as low as 9@10c., with no buyers. We quote: Fancy, 15c.; No. 1, 14c.; light amber, 12@13c. Extracted, light, 5@6½c.; dark, 4@5c.

Beeswax, 28@30c. J. A. L.

PHILADELPHIA, PA., Jan. 3.—Honey has declined in this market during the holidays. Large lots of California honey arriving, and selling at 5c. in 60-lb. cans. We quote: Comb honey, fancy, 16c.; fair to good, 8@14c. Extracted, 4@5½c.; white clover, 10c.

Beeswax, 30c. W. A. S.

BUFFALO, N. Y., Jan. 22.—Sales very light and market dull. We quote: Fancy white, 14@15c.; choice, 11@13c.; buckwheat, 7@9c. Extracted, 4@6c.

Beeswax, 25@28c. B. & Co.

CINCINNATI, O., Jan. 22.—Demand is slow for comb honey, which brings 12@14c. for best white. The demand is fair for extracted honey at 4@7c., with a scant supply.

Beeswax is in good demand at 25@28c. for good to choice yellow.

C. F. M. & S.

KANSAS CITY, Mo., Jan. 20.—The demand for comb and extracted honey is fair. We quote: No. 1 white comb, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 11@12c.; No. 2, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4c.

Beeswax, 22@25c. C. C. C. & Co.

WISCONSIN.—The annual meeting of the Wisconsin State Bee-Keepers' Association will be held Thursday and Friday, Feb. 6 and 7, 1895, in the capitol building at Madison. The program will appear in due time.

Platteville, Wis. N. E. FRANCE, Sec.

\$3.00 Worth for \$2.00 !

Until further notice, we propose to give you a chance to get some good reading-matter for the long winter evenings, at half price.

Send us \$2.00, and we will mail you your choice of \$2.00 worth of the following booklets, and also credit your subscription to the American Bee Journal for one year:

Poultry for Market and Profit.....	25c
Our Poultry Doctor.....	30c
Turkeys for Market and Profit.....	25c
Capons and Caponizing.....	30c
Rural Life.....	25c
Preparation of Honey for the Market.....	10c
Bee-Pasturage a Necessity.....	10c
Hive Use, by Doolittle.....	5c
Foul Brood, by Dr. Howard.....	25c
Foul Brood, by Kohnke.....	25c
Foul Brood, by Cheshire.....	10c
Bee-Keeping for Profit, by Dr. Tinker.....	25c
Kendall's Horse-Book—Eng. or German.....	25c
Silo and Silage, by Prof. Cook.....	25c
Hand-Book of Health, by Dr. Foote.....	25c
Maple Sugar and the Sugar Bush.....	35c
Potato Culture, by Terry.....	40c
Carp Culture, by Root & Finney.....	40c
Strawberry Culture, by Terry & Root.....	40c
Bleuen Kultur, by Newman (German).....	40c
Winter Problem in Bee-Keeping [Pierce].....	50c
Bee-Keepers' Directory, by Henry Alley.....	50c
Advanced Bee-Culture, by Hutchinson.....	50c
5 Honey as Food and Medicine.....	25c

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Honey-Jars, Shipping-Cases, and everything that bee-keepers use. **Root's Goods at Root's Prices**, and the best shipping point in the country. Dealer in Honey and Beeswax. Catalogue Free.

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To close out, I offer my Improved Queen-and-Drone Traps per 1/2 doz. in the flat, at \$1.75; per doz., \$2.75; per 25, \$5.00. Individual Right to manufacture and use, 50 cents; Township Rights, \$1.00; County Rights, \$5.00.

HENRY ALLEY,
141st WENHAM, MASS.

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We sell your Poultry, veal, fruits and all produce at highest prices. DAILY RETURNS. For stencils, prices and references, write F. I. SAGE & SONS, 183 Reade St., N. Y.

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AUG. WEISS

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Can do the work of four men using hand tools, in Rippling, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery. Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St., SENECA FALLS, N. Y.
141y Mention the American Bee Journal.

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 50 cents each, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money.

PERSONAL MENTION.

Geo. W. BRODBECK and W. W. BLISS, of California, secured medals on honey at the Atlanta Exposition. So Rambler reported in Gleanings.

Prof. Cook, as well as many other California bee-keepers, are expecting a good deal from their new Honey Exchange. May their fondest hopes be realized.

Hon. Geo. E. HILTON—the leading bee-keeping legislator—of Fremont, Mich., has been visiting the "Home of the Honey-Bees." It's about time he came to Chicago again.

Messrs. R. and E. C. PORTER, of this State, have made a bee-escape "for freeing honey and extracting rooms, house-appliances, etc., from bees." We expect to illustrate and describe it next week.

Mr. H. R. BOARDMAN, of East Townsend, Ohio, has been talking at Farmers' Institutes lately. One of his interesting addresses was given in Gleanings. He begins just right—at the ground.

SKYLARK is a new contributor to Gleanings. He's a high-flier, as his name indicates. Oh, but don't he "let fly" "right from the shoulder!" If Somnambulist, of the Progressive, catches him out some fine night, he'll wish he was skylarking around somewhere else.

Mrs. J. N. HEATER, of Columbus, Nebr., wrote thus kindly on Jan. 17: "We feel quite proud of our 'Old Reliable' in her new dress and still newer trimmings. The season, so far, has been very mild in this section, our bees having a good flight every week or ten days."

Mr. ERNEST R. ROOT, the able editor of Gleanings in Bee-Culture, made the Bee Journal, and Chicago in general, a short visit during the recent Chicago bee-convention. He also spent a day or two with Dr. Miller, at Marengo. We are always very glad to meet our fellow bee-editors, and none more so than Mr. Root.

JAMES MILLS, M.A., L.L.D., is the popular president of the Ontario Agricultural College, at Guelph, Ont. A splendid likeness of him appeared in the Canadian Bee Journal for December. We had the pleasure of meeting him at Toronto last September. He's the leading Methodist layman of Canada, we hear. Good man in a good place. Good for him!

Mrs. L. HARRISON, of Peoria, Ill., has gone for the winter, as usual, to St. Andrews Bay, Fla. How nice it is to be able to "go South," like the birds, to escape the rigorous cold of the North. We trust our sister may have a pleasant time amid the perfume-laden flowers, merry-warbling songsters, and busy-humming bees of the Sunny Southland.

EDITOR HUTCHINSON, in a letter received Jan. 22, says that his "own health is now pretty good." It will be remembered that last summer he suffered a good deal from rheumatism, so much so that he feared he would not be able to go to the Toronto convention in September. Mr. H.'s daughter, Ivy, who also has been sick the past two or three months, is slowly improving, we are glad to learn.

Mr. J. B. HALL'S PICTURE graces the first page of the January Canadian Bee Journal. He is the honored President of the Ontario Association, and the comb-honey chieftain of Canadian bee-dom. Too bad he's such a modest man everywhere except in a bee-convention. Wonder if we couldn't smug-

gle him over here occasionally, and "set him going" at some of our conventions. I think he's the man that could very seldom truthfully say "I don't know," when asked a bee-question.

Rev. ADAM BLAND—the husband of Mrs. Ellen C. Bland, a bee-keeper and Bee Journal subscriber in California—died in October, 1895. He was one of the pioneer Methodist preachers in that State, and did most efficient work in the southern part. We are acquainted with one of the sons (R. W. Bland), who is now preaching in Joliet, Ill., but who filled very acceptably prominent Methodist pulpits for several years in and about Chicago.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.

HILDRETH BROS. & SEGELKEN.

120 & 122 West Broadway.

CHAS. ISRAEL & BROS., 486 Canal St.

Kansas City, Mo.

C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Catalogs for 1896.—We have received the following Catalogs, Price-Lists, etc., a copy of which may be obtained upon application, always being careful to say you saw their advertisement in the American Bee Journal:

H. W. Buckbee, Rockford, Ill.—Seed and Plant Guide.

John Bauscher, Jr., Freeport, Ill.—Poultry Guide and Catalog. Price, 15 cents.

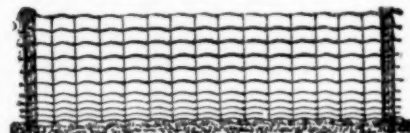
The A. I. Root Co., Medina, Ohio.—Bee-Keepers' Supplies.

C. N. Bowers, Dakota, Ill.—Poultry Annual and Book of Valuable Recipes. Price, 10 cents.

Reliable Incubator and Brooder Co., Quincy, Ill.—Eleventh Annual Catalog.

The Successful "Successful."

The Successful Incubator, manufactured by the Des Moines Incubator Co., of Des Moines, Iowa, in competition with some of the leading incubators of the country at a Kansas City Show, recently won first honors. This is indeed a great victory for the Successful Incubator, and it looks very much as if some pretty close competition for honors will be the result of the exhibits at the shows that are to be held at other places. The Des Moines Incubator Co. have recently issued their annual book—a complete treatise on poultry—and will be sent to any one for 10 cents in stamps.



What Venezuela Should Do.

"Lay low" until the boundary line is established, then put up a "Page," the only reliable "Bull" proof fence.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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17 Years with but one complaining letter.
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T. F. BINGHAM, Farwell, Mich.
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JNO. NEBEL & SON, High Hill, Mo.
Mention the *American Bee Journal*. 4A4f

The Rural Kansan

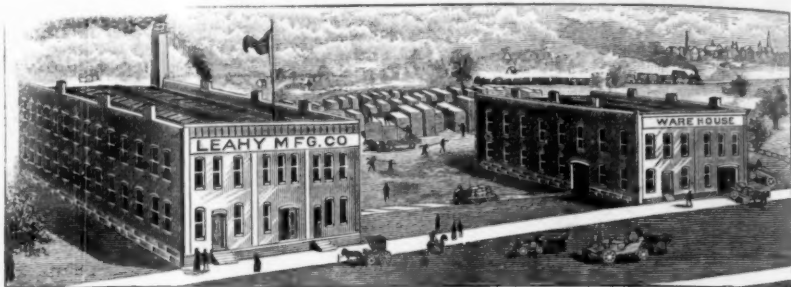
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HENRY L. MILLER,
355 Shawnee Ave., TOPEKA, KAN.
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FOR THE PRICE OF ONE.

To any one not now a subscriber to the *BEE-KEEPERS' REVIEW*, who sends \$1.00 for it for 1896, and says that he wants them, I will send 12 back numbers, free. This is done to induce those who are strangers to the *REVIEW* to become acquainted with its merits. To hold old subscribers is not difficult; and, to get the *REVIEW* into the hands of new men, that they too, may, in time, become old subscribers, is worth an extra effort, hence this offer. The back numbers of the *REVIEW*, most of them, have a value peculiarly their own; they are "special topic" numbers. That is, each number is really a little book in which may be found the views of the best bee-keepers upon some important apian subject. They are as valuable now as when published. Of some of these issues there are several hundred, of others not more than a dozen, and in filling these orders I must be allowed to make the selection, but no two copies will be alike. For 25c. extra, the 50c. book, *ADVANCED BEE-CULTURE* will be included. The *REVIEW* for 1896, 12 back numbers, and the book, all for only \$1.25

W. Z. HUTCHINSON, Flint, Mich.

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.



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Dear Sirs:—The Sections came duly to hand. Indeed, they are very nice. Yes, sir; they are as good as the best. CHARLES H. THIES, Steeleville, Illinois.
Leahy Mfg. Co.:—I have received the bill of goods. I must say they are the choicest lot of Hive-Stuff I have ever received from any place. I admire the smoothness of your work, and your close selection of lumber. Yours very truly, O. K. OLMSTEAD, Orleans, Nebr.
Dear Sirs:—The Sections arrived in due time, and are all O. K. so far as examined. They are simply perfection. I can't see how you can furnish such goods at such low prices. I hope you may live long and do well. Yours respectfully, Z. S. WEAVER, Courtney, Tex.
Gents:—I received the "Higginsville Smoker" all O. K. It's a dandy; please find enclosed stamps for another. Yours truly, OTTO ENDERS, Oswegatche, N. Y.
Gentlemen:—I have bought Supplies from nearly all the large manufacturers by the carload, and I must say yours are as good as the best. Indeed, in many lines they are the best. It is a pleasure to handle them. E. T. FLANAGAN, Belleville, Illinois.

The above unsolicited testimonials are a fair sample of hundreds we receive. Our prices are reasonable and the "Higginsville Goods" are the best.

We are now manufacturing for each of the following parties a Carload of Supplies: E. T. Flanagan, Belleville, Illinois; Charles H. Thies, Steeleville, Illinois; J. W. Rouse & Co., Mexico, Mo.; Henry Miller, Topeka, Kans.; Fulton & Gregg, Garden City, Kans.

If you need a Carload of Supplies, or only a Bee-Smoker, write to us. Remember, we are here to serve you, and will, if you give us a chance. **A Beautiful Catalogue Free.**

Address, **LEAHY MANUFACTURING CO., HIGGINSVILLE, MO.**
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For all the good, pure yellow **BEESWAX** delivered to our office on or before Feb. 20, 1896, we will pay 26 cents per pound, cash; or 30 cents for whatever part is exchanged for Bee Journal subscription or books that we offer. If you want **cash promptly** for wax, send it on at once. Dark or impure wax not taken at any price. Address plainly,

George W. York & Co., 56 Fifth Ave., Chicago, Ill.

SECTIONS, BEE-HIVES, SHIPPING-CASES

We make a Specialty of these Goods, and defy Competition in

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We are pleased to announce that, having secured control of the new Weed process of manufacturing foundation for the U. S., we are prepared to furnish **Foundation by the New Process**, for 1896. Samples will be mailed free on application, and will speak for themselves.

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Our 1896 Catalog

will be ready for distribution now in a few days. Send in your name at once for catalog, samples of the new foundation, and those superb sections, and while you are about it ask for late copy of *Gleanings in Bee-Culture*.

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